ABSTRACT OF THE DISCLOSURE

First, image data is converted using a first table storing conversion values in addresses corresponding to at least input values: u(k) represented by $u(k) = a\ b^{-k}$ (where a and b are constants and k is 0, 1, 2, ...m) of all input values and linear interpolation. Next, a second table storing conversion values set in response to the image data provided by conversion using the first table in addresses corresponding to at least input values: v(k) represented by v(k) = ck+d (where c and d constants and k is 0, 1, 2, ...n) of all input values is stored in memory. Next, the image data provided by conversion using the first table is again converted using the second table and linear interpolation.